

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of)
Standard Oil Company of California)
and the Department of Fish and Game)
for Review of Order No. 75-50 (NPDES)
Permit No. CA0000337) of the California)
Regional Water Quality Control Board,)
Los Angeles Region. Our Files Nos.)
A-105(a) and A-105(b).)
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Order No. WQ 78-18

BY THE BOARD:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) adopted Order No. 75-50, NPDES Permit No. CA0000337 on April 21, 1975. The permit prescribes waste discharge requirements for Standard Oil Company's El Segundo refinery. The waste discharge requirements were based on a report of waste discharge submitted by Standard Oil Company, Effluent Limitation Guidelines issued by the Environmental Protection Agency for the Petroleum Refining Point Source Category (40 CFR 419, hereafter referred to as EPA Guidelines) and the Water Quality Control Plan for Ocean Waters of California (Ocean Plan).

On May 19, 1975, by separate petitions, the State Water Resources Control Board (State Board) was requested to review the action of the Regional Board by Standard Oil Company and the California Department of Fish and Game, in accordance with Section 13320 of the Water Code. The petitions have been consolidated for purposes of review.

Resolution of these petitions has been held in abeyance pending amendment of the Ocean Plan. The amended Ocean Plan was adopted by the State Board in January of 1978, and, as amended, was recently approved by the Environmental Protection Agency and is now in effect.

I. BACKGROUND

Standard Oil Company of California operates a petroleum refinery in the City of El Segundo, Los Angeles County.

The refinery processes up to 405,000 barrels of crude oil per day, having started up low sulfur fuel oil manufacturing facilities in early 1976. The refinery is in the "Petrochemical" subcategory as defined by the EPA Guidelines.

The refinery discharges up to 58.1 million gallons per day (mgd) of wastewater to the Pacific Ocean through a 550-foot outfall that terminates in 20 feet of water. The wastewater consists of 52.6 mgd of process waste and cooling water and up to 5.5 mgd of rainfall runoff. Sulfur compounds, nitrogen compounds, and organic acids are recovered from the waste stream prior to discharge. Oily wastes are treated in a separator prior to discharge.

II. CONTENTIONS AND FINDINGS

The contentions of the petitioners and our findings relative thereto are as follows:

1. Contention: Standard Oil Company has raised two issues in their petition, (a) that the waste discharge requirements are overly restrictive in their limitation of chromium

(effluent limitation "A.4" limits total chromium concentration to 0.005 mg/1 average and 0.01 mg/1 maximum); and (b) that the provisions of the waste discharge requirements requiring **initial** dilution efficiency of 100 to 1 are unreasonable. (Provision C.8 requires extension of the existing refinery ocean outfall line with diffuser to attain an initial dilution efficiency of 100 to 1 at least 50 per cent of the time and 80 to 1 at least 90 per cent of the time.)

Findings: The two issues raised by Standard Oil, namely the chromium limitation and the requirement of initial dilution efficiency of 100 to 1, were included in Order No. 75-50 by the Regional Board to implement the Ocean Plan which was in effect at the time the Regional Board's order was adopted. The Ocean Plan as amended in 1978 contains a modified chromium limitation which applies to the receiving water upon completion of initial dilution (see Table B, beginning on page 5) whereas the former Ocean Plan contained both an effluent limitation for chromium in the wastewater prior to dilution and a requirement for a specified amount of dilution immediately after discharge. The Regional Board should now amend its requirements for this discharger and other ocean dischargers to reflect the provisions of the amended Ocean Plan.

2. Contention: The Department of Fish and Game has raised essentially one issue. It objects to the lack of concentration limits for suspended solids, oil and grease, phenols and ammonia nitrogen.

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Findings: Order No. 75-50 contains mass emission limits for, among other things, suspended solids, oil and grease, phenols, and ammonia nitrogen. Mass emission rates for these parameters were calculated for this discharge based on EPA Effluent Guidelines. No concentration limits are required by the Guidelines and none were included in Order 75-50.

The Ocean Plan, as amended in 1978, however, establishes receiving water concentration limits for two of these parameters, specifically, phenols and ammonia nitrogen (see Table B). These substances can be toxic to aquatic life or can create other undesirable conditions in the receiving water if discharged in sufficiently high concentrations. The Regional Board's requirements must conform to the Ocean Plan and; therefore, should be amended to include effluent limitations that assure compliance with the receiving water concentrations specified in Table B for these two constituents.

Since the Ocean Plan, as amended, imposes no concentration limits for suspended solids and oil and grease for industries covered by federal effluent limitation guidelines (see paragraph preceding Table A, page 5) we must undertake further consideration of the allegations with respect to these constituents. The Department alleges that toxic "slugs" of waste can occur and not violate mass emission rates. However, in this case this condition would appear to be highly unlikely because storage in the treatment processes provided prior to discharge effectively spreads any waste slugs so that they will either meet the Ocean Plan requirements or be reflected as a violation of the daily mass emission rates.

III. CONCLUSIONS

After review of the record, and for reasons heretofore expressed, we have reached the following conclusions:

1. The Regional Board, with no discretionary authority, applied strict chromium limits as required by the 1972 Ocean Plan and included a requirement for an initial dilution efficiency of 100 to 1 as recommended by the Plan. The Ocean Plan has now been amended and the chromium and dilution provisions of the Plan have been modified. The Regional Board should amend its requirements consistent with the amended Plan.

2. With respect to the issue raised by the Department of Fish and Game, the Regional Board applied mass emission rates to suspended solids, oil and grease, phenols, and ammonia nitrogen based on federal Effluent Guidelines. The Regional Board should amend its requirements to reflect the receiving water concentration limits for ammonia nitrogen and phenols contained in the Ocean Plan as amended in 1978. Although concentration limits for oil and grease and suspended solids would have been required by Table A of the 1972 Ocean Plan, the current Ocean Plan does not require concentration limits for substances listed in Table A when an industry is covered by Effluent Guidelines as is the case here. In addition, storage capacity in the treatment process will attenuate any "slugs" of these constituents. Therefore, no concentration limits need be imposed in these requirements for these constituents.

IV. ORDER

IT IS THEREFORE ORDERED that the Regional Board amend its requirements in conformity with this Order.

Dated: SEP 25 1978

/s/ John E. Bryson
John E. Bryson, Chairman

/s/ W. Don Maughan
W. Don Maughan, Vice Chairman

Absent
W. W. Adams, Members

/s/ William J. Miller
William J. Miller, Member

/s/ L. L. Mitchell
L. L. Mitchell, Member